ENERGY STAR

ENERGY STAR® FOR WINDOWS, DOORS, AND SKYLIGHTS

COST & ENERGY SAVINGS ESTIMATES FOR ENERGY STAR QUALIFIED WINDOWS

ESTIMATED ANNUAL SAVINGS: U.S. CITIES

	Relative to Single Pane		Relative to Typical Alternative			
			Replacement		New Construction	
CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
AK, Anchorage	$360	65	$50	9.4	$50	9.2
AK, Fairbanks	$460	83	$65	13.5	$80	11.3
AL, Birmingham	$75	19.4	$30	2.2	$30	2.2
AL, Mobile	$80	7.5	$65	0.2	$65	0.5
AR, Little Rock	$290	22.6	$45	2.6	$45	2.5
AZ, Phoenix	$275	16.7	$80	3.5	$80	3
AZ, Flagstaff	$545	44.1	$25	1.8	$25	1.7
AZ, Tucson	$260	17.4	$55	2.5	$60	2.1
CA, Fresno	$205	12	$60	2.1	$60	1.8
CA, Los Angeles [1,2]	$60	4.4	$10	0	$10	0
CA, Red Bluff	$235	14.8	$65	2.5	$65	2.2
CA, San Diego	$55	3.7	$20	0.3	$20	0.3
CA, San Francisco [2]	$100	9.1	($5)	-0.8	($10)	-0.4
CA, Arcata [2]	$135	12.5	$0	-0.4	($5)	-0.2
CA, Bakersfield	$190	10.4	$60	2	$60	1.6
CA, Daggett	$230	11.3	$75	2	$75	1.8
CA, Sacramento	$165	11.6	$40	1.5	$40	1.3
CO, Denver	$330	34.8	$45	3.3	$45	3.1
CO, Grand Junction	$320	31.8	$55	3.4	$55	3.2
CT, Hartford	$405	25.9	$90	4.8	$90	4.5
DC, Washington	$430	27.9	$60	3.4	$60	3.3
DE, Wilmington	$560	41.7	$70	4.4	$70	4.3
FL, Jacksonville	$160	7.4	$60	1	$50	1.2
FL, Miami	$165	6.8	$140	5.1	$140	4.6
FL, Daytona Beach	$140	6.1	$75	2	$70	2
FL, Tallahassee	$155	7.2	$45	0.3	$35	0.6
FL, Tampa	$160	6.8	$100	3	$95	2.9

CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
GA, Atlanta	$355	24.6	$45	2.4	$45	2.3
GA, Savannah	$260	17.1	$45	2.1	$45	1.9
IA, Des Moines	$315	28.7	$70	5.4	$75	5.3
ID, Boise	$365	36.6	$45	4.1	$45	3.8
IL, Chicago	$235	23.4	$55	4.7	$55	4.4
IL, Springfield	$225	21.6	$55	4.3	$55	4.1
IN, Indianapolis	$285	25.2	$60	4.8	$65	4.5
KS, Wichita	$265	23	$60	4	$60	3.8
KY, Lexington	$390	34.7	$55	4.3	$55	4.2
KY, Louisville	$350	30.9	$50	3.9	$50	3.8
LA, Lake Charles	$125	7.8	$60	1.6	$55	1.6
LA, New Orleans	$110	6.5	$55	1.3	$50	1.4
LA, Shreveport	$200	14.7	$45	2.2	$45	2
MA, Boston	$410	26.6	$75	4.1	$75	4.1
MD, Baltimore	$435	33.3	$55	3.6	$55	3.5
ME, Portland	$405	27	$70	3.9	$65	4
MI, Detroit	$420	45.8	$80	8.3	$85	7.9
MI, Grand Rapids	$440	48.2	$90	9.1	$90	8.8
MI, Houghton	$500	55	$95	10.2	$95	10.3
MN, Minneapolis	$275	27	$60	5.3	$65	5.2
MN, Duluth	$330	33.2	$65	6.1	$65	6.3
MO, Kansas City	$285	24.6	$65	4.7	$65	4.5
MO, St. Louis	$285	24.6	$65	4.8	$65	4.5
MS, Jackson	$205	15.5	$45	2.3	$45	2.2
MT, Great Falls	$600	61.9	$75	7.2	$75	7.1
MT, Billings	$570	58.4	$75	6.6	$75	6.5
NC, Raleigh	$275	20.6	$45	2	$40	2.3
ND, Bismark	$305	30.8	$60	5.9	$65	5.8
NE, Omaha	$230	24.3	$55	4.8	$55	4.5
NH, Concord	$410	28.7	$80	4.9	$80	4.8
NJ, Atlantic City	$375	30.3	$65	4	$65	4.2
NM, Albuquerque	$245	24	$35	1.6	$35	1.5
NV, Las Vegas	$315	18.8	$70	2.2	$70	1.8
NV, Reno	$380	31.2	$40	2.3	$40	2.2
NY, Buffalo	$380	28.1	$85	5.6	$90	5.5
NY, New York	$295	21.1	$70	3.5	$70	3.4
NY, Albany	$370	27	$85	5.1	$85	5

CITY	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)	Utility Dollars	Btu (millions)
OH, Dayton	$290	24.7	$60	4.7	$65	4.4
OH, Cleveland	$305	25.8	$65	5.2	$70	5
OK, Oklahoma City	$330	30.4	$45	2.9	$45	2.9
OR, Medford	$350	27.8	$55	3.4	$50	3.5
OR, Portland	$360	29	$45	3.2	$45	3.4
PA, Philadelphia	$335	25.3	$65	4.3	$70	4.1
PA, Pittsburgh	$380	29.4	$80	5.7	$85	5.5
PA, Williamsport	$375	28.8	$75	5.3	$80	5.2
RI, Providence	$360	25.3	$65	3.9	$65	3.8
SC, Charleston	$200	13.6	$45	1.6	$40	1.7
SC, Greenville	$240	17.3	$40	1.7	$40	2
SD, Pierre	$285	26.8	$60	5	$60	4.8
TN, Memphis	$230	17.6	$45	2.2	$40	2.4
TN, Nashville	$280	22	$50	3	$50	3.1
TX, Brownsville	$180	8.6	$135	4.5	$135	4.1
TX, El Paso	$225	16.1	$50	1.9	$50	1.6
TX, Fort Worth	$240	17.3	$55	2.4	$60	2.1
TX, San Antonio	$165	9	$100	2.3	$95	2.2
TX, Houston	$160	8.6	$95	2.5	$90	2.4
TX, Lubbock	$275	23.1	$45	2.1	$45	2
UT, Salt Lake City	$280	28.8	$45	3.5	$45	3.3
UT, Cedar City	$255	26.9	$35	2.4	$35	2.3
VA, Richmond	$390	28.9	$50	2.8	$50	2.8
VT, Burlington	$405	34.1	$85	6.2	$85	6.2
WA, Seattle	$310	28	$35	3	$35	2.9
WA, Spokane	$425	38.1	$55	4.5	$55	4.4
WI, Madison	$290	26.3	$65	5	$65	4.9
WV, Charleston	$465	38.2	$55	4.5	$60	4
WY, Cheyenne	$405	41.6	$40	4.1	$40	4.1

U.S. Department of Energy (2005)

ASSUMPTIONS

Relative to Single Pane: Savings estimates based on average annual energy use for a 2,000 sq. ft., single story, detached house with 15% glazing, gas heat and electric air conditioning. Estimates use state average utility rates. Actual savings will vary by home characteristics.

Relative to Typical Alternative: Savings estimates based on average annual energy use for a 2,000 sq. ft., single story, detached house with 15% glazing, gas heat and electric air conditioning. Estimates use state average utility rates. The typical alternative (clear glass, double pane) may not be applicable to all jurisdictions due to mandatory building codes. Actual savings will vary by home characteristics.

For full assumptions and methodology visit: www.energystar.gov/windows.

END NOTES

[1] Anomalies such as negative savings (costs) occur when the cooling energy savings from ENERGY STAR qualified windows are less than the heating energy penalty, resulting in slightly greater average energy use than double clear windows.

[2] Negative energy savings (increased energy use) and positive dollar savings occur simultaneously because electric cooling costs per Btu in August 2005 in California were more than three times those for gas heating per Btu. The greater savings per Btu of electricity outweigh the increased heating costs leading to overall monetary savings.